

May 25, 2016



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 16195  
(SECOND REVISION)

**EXPIRATION DATE: 2020-04-30**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Jaguar Instruments, Inc.  
Houston, TX
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification cylinders made in conformance with DOT Specification 3E with exceptions, for the transportation of Division 2.1 and Division 2.2 gases in commerce. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302a and 173.304a in that non-DOT specification cylinders are not authorized, except as provided herein.
5. BASIS: This special permit is based on the application of Jaguar Instruments, Inc. dated May 23, 2016, submitted in accordance with § 107.109.

**May 25, 2016**6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Division 2.1 and 2.2 gases authorized for transportation in DOT Specification 3E cylinders	2.1 or 2.2 as appropriate	Various	N/A

7. SAFETY CONTROL MEASURES:

PACKAGING - Prescribed packaging is a non-DOT specification cylinder made in conformance with the requirements for a DOT specification 3E cylinder under §§ 178.35 and 178.42 except as follows:

§ 178.42(a) *Type, size and service pressure*

Seamless tubing or Drawn Over Mandrel (D.O.M.) tubing either:

1) partially closed in at either end with closure on either end by circumferentially welded end caps, or

2) end caps on either end formed by swaging and spinning 50mm tubing (2.5mm wall thickness).

Cylinders will not exceed 90 cubic inches in water capacity and have a maximum service pressure of 1800 psig. The cylinder outside diameter must not exceed 4.5 inches.

§ 178.42(d) *Manufacture* - The last sentence is deleted. (ADD): Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3 "Standards for Welding on Thin-Walled, Steel Cylinders".

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§ 178.42(f)      *Hydrostatic test*

(1) One cylinder out of each lot of 500 or less must be subjected to a hydrostatic pressure of 6000 psig.

(2) The cylinder referred to in paragraph (f)(1) of this section must burst at a pressure higher than 6000 psig without fragmenting or otherwise showing lack of ductility.

(3) One additional cylinder from each lot of 500 or less must be selected and the circumferential weld must be subjected to a flattening test between the knife edges of a hydraulic press. The weld must be at right angles to the knife edges. The knife edges shall be 60° wedge shaped with the edge rounded to 0.5" radii. The seam must flatten without cracking to six times its original thickness between knife edges. *Flattening test for cylinders without circumferential welds must be accomplished to six times the wall thickness.*

(4) All remaining cylinders in each lot of 500 or less must be subjected to a hydrostatic pressure of 3000 psig for 30 seconds. There should be no distortion or indications of defects.

§ 178.42(g)      *Leakage test*

All cylinders must be tested for leakage by internal air or gas at 1800 psig following the hydrostatic test. Pressure must be applied for a minimum of one minute. Leakers must be rejected.

§ 178.42(i)      *Marking - Cylinder marking must be at least 5/32" in height and conforms to the following:*

DOT-SPxxxxx  
1800, XY  
material, size, mfg date

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c. OPERATIONAL CONTROLS - Cylinders must be shipped in strong outside packaging complying with § 173.301(a)(9). Each cylinder must be secured against movement within the overpack.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Safety Approvals and Permits Division for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. Charging of cylinder with liquefied gases must meet the requirements in § 173.304a.

g. Transportation of Class 2.1 (flammable gases) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).

h. Transportation of Oxygen or oxidizing gases by air must be in accordance with §§ 173.302(f) or 173.304(f).

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9. MODES OF TRANSPORTATION AUTHORIZED: Motor Vehicle, Cargo aircraft, Cargo Vessel, Rail Freight.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
  - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
  - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

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12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm) Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Victor Casillas/SG